

FIG 3

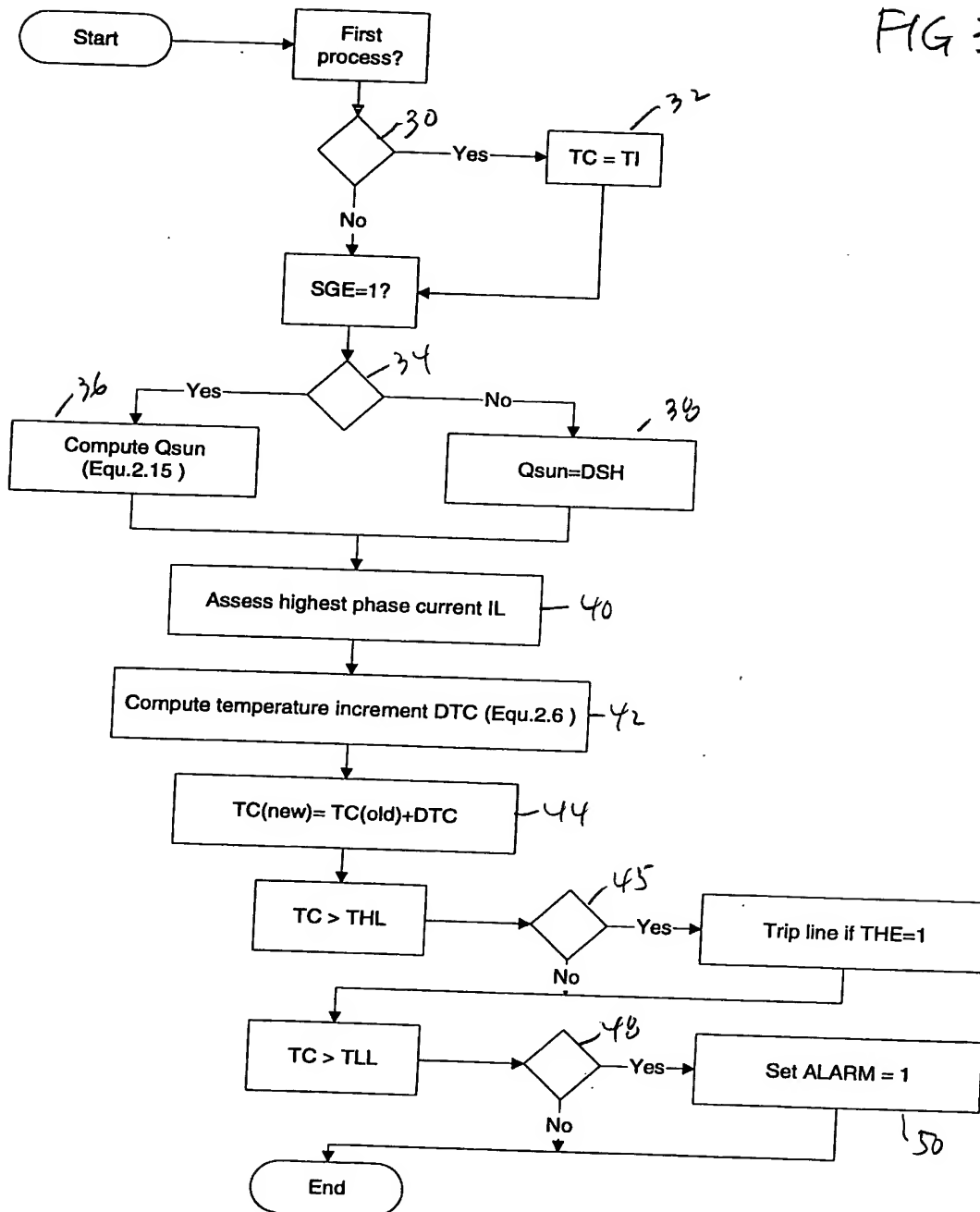


FIG 4

1	PMV03 := 70.430000	#CONDUCTOR LONGITUDE
2	PMV04 := 75.000000	#LSTD
3	PMV05 := 0.500000	#SAC
4	PMV06 := 0	#VALUE OF DEFAULT SOLAR HEATING
5	PMV07 := 0	#ESTIMATED OFFSET TEMPERATURE
6	PMV08 := 1.000000	#DIAMETER
7	PMV09 := 45.560000	#CONDUCTOR LATITUDE
8	PMV10 := 25	#VALUE OF INITIAL TEMPERATURE
9	PMV11 := 0.02216	#VALUE OF RAC CONDUCTOR RESISTANCE
10	PMV12 := 0.00008333	#VALUE OF RDELTA TEMPERATURE COEFFICIENT
11	PMV13 := 392.086	#VALUE OF THC THERMAL HEAT CAPACITY
12	PMV14 := 1.859	#VALUE OF TRA THERMAL RESISTANCE TO AMBIENT
13	PMV15 := 90	#VALUE OF TH HIGH TEMPERATURE THRESHOLD
14	PMV16 := 80	#VALUE OF TL LOW TEMPERATURE THRESHOLD
15	PMV17 := 0	#ESTIMATED AMBIENT TEMPERATURE
16	PMV18 := RTD01	#VALUE OF A TA AMBIENT TEMPERATURE
17	PSV05 := 1	#STATE OF SGE SOLAR GENERATOR ENABLE
18	PSV06 := 1	#STATE OF THERMAL SENSOR ENABLE
19	PSV18 := 1	#STATE OF THERMAL TRIP ENABLE
20	PMV01 := DDOY	#DAY OF THE YEAR
21	PMV02 := THR + TMIN * 0.0166667	#HOURS OF THE DAY
22	PMV20 := 23.450001 * SIN((284.000000 + PMV01) * 0.98630137)	#SUN DECLINATION
23	PMV21 := (PMV02 - 12.000000) * (-15.000000)	#LOCT
24	PMV22 := PMV21 + (PMV03 - PMV04)	#WS
25	PMV24 := SIN(PMV20) * SIN(PMV09) + COS(PMV20) * COS(PMV09) * COS(PMV22)	#COS(Z)
26	PMV25 := PMV24 * PMV24	
27	PMV27 := 27682.000000 * PMV24 - 297.000000 - 44416 * PMV25	
28	PMV25 := PMV24 * PMV25	
29	PMV27 := PMV27 + 40023 * PMV25	
30	PMV25 := PMV25 * PMV24	
31	PMV27 := PMV27 - 17469 * PMV25	
32	PMV25 := PMV25 * PMV24	
33	PMV27 := PMV27 + 2498 * PMV25	
34	PMV28 := PMV27	#SIR VALUE
35	PMV29 := PMV05 * PMV08 * PMV28	#QSUN VALUE
36	PSV01 := PMV29 >= 0	
37	PMV30 := (PMV29 * 0.001) * PSV01	
38	PSV08 := NOT PSV05	
39	PMV30 := ((PMV29 * 0.001) * PSV01) * PSV05 + PMV06 * PSV08	#QSUN VALUE

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FIG 4 (cont.)



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49 PSV02 := PFRTEX                                #DETECTION OF FIRST PROCESING INTERVAL
41 PSV03 := NOT PFRTEX
42 PMV35 := PMV10 * PSV02 + PMV35 * PSV03          # INTRODUCTION OF THE TC INITIAL VALUE
43 PSV10 := (LIARMS >= LIBRMS) AND(LIARMS >= LICRMS) #STATE OF PHASE A LARGEST CURRENT
44 PSV11 := ((LIBRMS >= LIARMS) AND(LIBRMS > LICRMS)) OR ((LIBRMS > LIARMS) AND(LIBRMS >= LICRMS))
45 PSV12 := ((LICRMS >= LIARMS) AND(LICRMS > LIBRMS)) OR ((LICRMS > LIARMS) AND(LICRMS >= LIBRMS))
46 PMV19 := LIARMS * PSV10 + LIBRMS * PSV11 + LICRMS * PSV12 #CHOICE OF GREATEST RMS PHASE CURRENT
47 PSV07 := NOT PSV06
48 PMV32 := (PMV18 * PSV06 + PMV17 * PSV07) + PMV07 #VALUE OF AMBIENT TEMPERATURE
49 PMV36 := ((PMV19 * PMV19) * (PMV11 + (PMV35 - 25) * PMV12)) * 0.001
50 PMV37 := ((PMV36 + PMV30) / PMV13) - ((PMV35 - PMV32) / (PMV13 * PMV14))
51 PMV38 := PMV37 * (0.00208333)                    # TEMPERATURE INCREMENT
52 PMV35 := PMV35 + PMV38                            # TEMPERATURE INTEGRATION
53 PCT10IN := PMV35 > PMV16                          #DETECTION OF ALARM STATE
54 PCT10PU := 10
55 PCT10DO := 10
56 PCT11IN := (PMV35 > PMV15) AND PSV18              #DETECTION OF TRIP STATE
57 PCT11PU := 10
58 PCT11DO := 10

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